SRNL techbriefs
SAVANNAH RIVER NATIONAL LABORATORY

StrataSampler™ Device

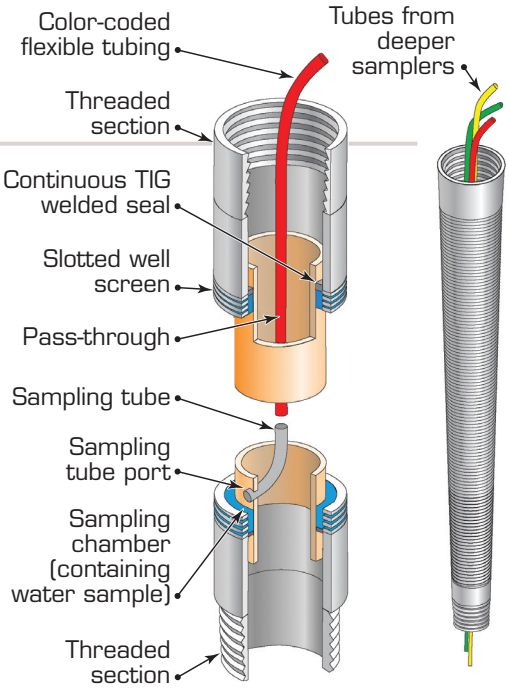
The StrataSampler™ device is used for the collection of soil vapor and water samples. Multiple devices can be placed in a single borehole to allow the collection of discrete samples from several different depths. The device has a simple, yet functional design which requires no special installation method and no special training.

Improved sampling

Traditional wells consist of a well screen, casing, and materials to fill the annulus between the well screen/casing and the borehole wall. Existing multilevel sampling devices use either a cluster of several wells or a single well with an array of inflatable packers to isolate sample intervals. The use of numerous inflatable packers results in complex arrangements of the pressure and sampling lines increasin g the number of connections and parts that can fail, reducing the reliability of the samples.

The well screen of the StrataSampler™ device shares the casing and borehole wall eliminating the need for multiple boreholes. Sample intervals in the StrataSampler™ device are isolated from each other and do not require secondary isolation using packers, reducing the potential of vertical migration within the monitoring well.

Installation of several StrataSampler™ devices in a single borehole reduces the amount of investigative derived waste that is generated and ultimately requires disposal. Drilling and waste disposal costs are reduced by a factor of three to five using this device.



at a glance

- no prior training required
- no special installation required
- monitors soil vapor and water
- allows multi-level sampling without digging cluster wells
- can be constructed of PVC, stainless steel, or Teflon®

Adaptable for many applications

The StrataSampler™ has been tested by Savannah River National Laboratory (SRNL) personnel as well as independent firms.

The South Carolina Department of Health and Environmental Control approved an independent consulting firm to test the device at the Barnwell County Landfill. Using the device reduced the number of boreholes drilled from 50 to 10.

The University of Miami-Ohio in conjunction with the U.S. Department of Energy and the Russian Ministry of Atomic Energy successfully tested the The StrataSampler™ as well as the U.S. Geological Survey department.

Technology transfer

SRNL is the applied research and development laboratory at the Savannah River Site (SRS). With its wide spectrum of expertise in areas such as homeland security, hydrogen technology, materials, sensors, and environmental science, SRNL's cutting edge technology delivers high dividends to its customers.

SRNL and SRS are managed for the U.S. Department of Energy by Washington Savannah River Company (WSRC). WSRC is responsible for transferring technologies to the private sector so that these technologies may have the collateral benefit of enhancing U.S. economic competitiveness.

Partnering opportunity

The U.S. Patent and Trademark Office has issued Patent Nos. 5.775.424 and 5,922,950 on the StrataSampler™ device.

WSRC invites interested companies with proven capabilities in this area of expertise to enter into a licensing agreement with WSRC to manufacture and market this device as a commercial product. Interested companies will be requested to submit a business plan setting forth company qualifications, strategies, activities, and milestones for commercializing this invention. Qualifications should include past experience at bringing similar products to market, reasonable schedule for product launch, sufficient manufacturing capacity, established distribution networks, and evidence of sufficient financial resources for product development and launch.

for more information

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